Overview of Research, Development, and Transfer Activities of Amici

Wisconsin Alumni Research Foundation ("WARF") was established as a non-profit entity to promote, encourage, and aid scientific investigation and research at the University of Wisconsin-Madison. To achieve this goal, its primary activities include promoting innovation, managing patents, and funding research. Founded in 1925, among its first actions was to patent Professor Harry Steenback's breakthrough discoveries in vitamin D. In 1927, WARF granted its first license for vitamin D supplements, which ultimately led to the worldwide elimination of rickets by the 1940's. Today, among WARF's most important patents are: the blood anticoagulant Warfarin; a coding process making pills easier to swallow; treatments for osteoporosis and cancer; magnetic resonance techniques; and a discovery known as the "Wisconsin Solution" that prolongs the use of transplant organs. All of WARF's 3,000 discoveries are administered with a commitment to continuing research, public education, and vigilance in protecting the public interest by enforcing quality control and preventing the unscrupulous exploitation of technologies.

The Regents Of The University Of California provides for technology transfer from ten campuses and five medical schools in the State, and three national laboratories operated by the University system on behalf of the U.S. Department of Energy. Currently, there are more than 3,000 ongoing research projects supervised by 13,000 principal investigators. These efforts in the last ten years have led to three Nobel laureates in a long list of pioneering research discoveries in biochemistry, bioengineering, cell biology, disease procedures, development biology, endocrinology, genetics, immunology, neurobiology, oral biology, pharmacy, and pharmacology. Example of specific discoveries include: the Cohen Boyer process for gene

splicing (a co-invention of Standford University and the University of California San Francisco ("UCSF")); the Hepatitis B vaccine (UCSF); a human growth hormone; and a method to treat aneurysms by use of a catheter instead of opening the skull (UCLA). UCSF also has contributed to cochlear implants to help the hearing impaired. UC Davis has contributed to a method detecting feline immune deficiency virus. Lawrence Livermore National Laboratory has contributed to a method for detecting feline immune deficiency virus. Lawrence Livermore National Laboratory has contributed to a method for detecting chromosome abnormalities, now successfully commercialized through FDA approvals to a company dedicated to the technology. UC Irvine has contributed to a laser system to enhance treatment of skin conditions. UC Riverside has contributed to a new phosphorus fertilizer. UC Berkeley and UC San Diego have contributed to fluorescence detection systems used in manipulation of cells. UC Santa Barbara has contributed to a new atomic force microscope.

Cornell Research Foundation, Inc. ("CRF") is a non-profit subsidiary of Cornell University responsible for the evaluation, protection, and commercialization of innovations resulting from its research programs. CRF has issued over 800 active licenses to more than 250 companies and has helped create a number of start-up companies. The products of these enterprises include: flat-screen TV's; Web-based video editing techniques; methods for improving agricultural crops; novel ways of producing Internet switching devices; a fortified powdered orange drink to improve children's growth and mental development; biodegradable hydro-gels that deliver medications inside the body; and anchor skin and vascular grafts; a new light weight polymer material reinforced with glass or carbon fibers stronger than steel; self-guided robots that can "think" – and play championship soccer; behavioral

economics techniques that analyze how and why people mismanage money; a method of eliminating deadly E-coli 0157:H7 bacteria from meat; and ways by which on-shore pollution causes disease in the ocean.

University Of Florida established the non-profit University of Florida Research Foundation, Inc. in 1986 to promote, encourage, and provide assistance to the research activities of university faculty, staff, and students. Its mission is to provide the means by which research can be conducted flexibly and efficiently and discoveries, inventions, processes, and work products can be transferred from laboratory to the public. The funds generated by licensing such technologies are used to enhance research at the University of Florida, which has more than 100 service and education centers, bureaus, and institutes. More than two dozen faculty are members of the National Academies of Science and/or Engineering, the Institute of Medicine, or a counterpart in another nation. Among its most prominent research affiliates are the University of Florida's Brian Institute, Health Science Center, National High Magnetic Field Laboratory, and Whitney Marine Laboratory.

SUNY Research Foundation is a private, non-profit educational corporation responsible for the administration of externally-funded contracts and grants for and on behalf of the State University of New York. In 1990-2000, SUNY Research Foundation sponsored more than 7,500 programs to facilitate research, education, and public service at 30 state-operated locations. The State University of New York's research contributions are helping to solve some of today's most urgent problems. At the same time, contracts and grants received by university faculty directly benefit the economic development of the regions in which they are located. The State University of New York researchers pioneered nuclear magnetic resonance imaging and the supermarket bar code scanner, introduced

time-lapse photography of forestry subjects, isolated the bacteria that causes Lyme disease, and developed the first implantable heart pacemaker. Other researchers continue important studies in such wide-ranging areas as breast cancer, immunology, marine biology, sickle-cell anemia, robotics, and make hundreds of other contributions, inventions and innovations for the benefit of society.

University of Vermont ("UVM") is the state's only comprehensive research university. It is a national leader in identifying effective practices for educating children with disabilities and the university's research has helped stop smoking, promote effective breast cancer screening, and prevent AIDS and diabetes. Environmental research has been critical in lake and river quality, tracking fish senses, and fish breeding habits and health. UVM has been active in the transfer of technologies to Vermont business, which has created jobs and support innovation. For example, it has provided technical support to a Vermont company in x-ray lithography and the university is linked with a business that is experimenting in polymer to address a semiconductor adhesion problem. UVM research also has developed optical switches for communication systems. UVM plays a central role in the Vermont Technology Council, which has helped create links with business, academia, and state government to benefit Vermont's economy.

Oregon Health & Science University ("OHSU"). OHSU's fundamental purpose is to improve human health. It accomplishes this mission by: educating physicians, dentists, nurses, biomedical scientists and allied health professionals; conducting basic and applied research on the prevention, treatment and cure of diseases and injuries; providing comprehensive, innovative and cutting-edge patient care; and

improving access to care and education through its public service and outreach activities. In the past decade, some of the nation's most accomplished scientists have flocked to OHSU. Accordingly, OHSU has a well-earned reputation as a premier biomedical research institution and now maintains multimillion dollar, multiyear training and research grants in such areas as neurodegenerative disease (*e.g.*, Alzheimer's and Parkinson's), addictive disorders, stress, cancer, heart disease, genetic disorders, stroke, sleep disorders, neurosciences, toxicology, physiology and pharmacology, eye disorders, hearing loss, hypertension and clinical nutrition. OHSU scientists announce breakthroughs and innovations about every seven days. Approximately 1,500 scientists are working on basic and applied research projects at present.

Washington Research Foundation ("WRF") assists Washington State University research institutions with emerging technologies, through intellectual property management and start-up investment activities, primarily with local private technology companies. The University of Washington has over 90 specialized research centers and institutes, which focus on such areas as marina resources, transportation, women's health, and managing pain, which are supported by WRF. WRF also has been a leading institution in technology transfer partnering with local business, several of which are described below. Amnis Corporation, a Seattle-based start-up founded in 1998, is developing high throughput laboratory automation tools that use a novel molecule detection technology. Theorus Corporation, based in Seattle, is commercializing therapeutic ultrasound products that provide effective, non-invasive surgical management of benign and malignant lesions, trauma conditions and selected functional disorders. The first application of its TheraSeal™ System is arterial puncture sealing. EKOS Corporation, a Bothell, Washington medical device company, is developing

technologies that use localized ultrasound to facilitate, enhance, or control the delivery or activation of drugs at a targeted tissue site. Micronics, Inc., based in Redmond, develops and commercializes innovative healthcare products using the unique capabilities of Micro Electro Mechanical Systems (MEMS) technology. Corus Pharma, Inc., based in Seattle, develops pharmaceutical products that address unmet needs in infectious disease and respiratory disorders. Point of CareWare, a Bellevue, Washington start-up, develops, markets, and supports products designed to improve the operations and quality of care provided by Post Acute Care facilities. Confirma, Inc., based in Kirkland, Washington, is a medical device company focused on developing and marketing magnetic resonance data analysis software and database products, which help physicians make more informed decisions. The company's lead product enables radiologists to interpret MRI images with greater precision and confidence for staging, therapeutic monitoring, and detection of recurrent solid tumor cancers. Koronis Pharmaceuticals, Inc. was founded in 1998 to discover and develop antiviral small molecule drugs, with a particular focus on therapies for chronic viral diseases including those caused by the human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV). Lumera Corp. develops electro-photonic components based on proprietary polymer materials licensed from the University of Washington. nLight Photonics Corp., based in Seattle, is developing subsystems that will expand the capabilities and performance of optical networks. nLight's proprietary technology and manufacturing expertise will enable high-performance, cost effective networks. Intelligent Ion, based in Seattle, is developing a miniature mass spectrometer based on proprietary technologies developed at the University of Washington and California Institute of Technology/Jet Propulsion Laboratory. Intelligent Ion is focusing its products for applications in the chemical industry and environmental

market. Ostex International, Inc., is engaged in the discovery, development, and commercialization of diagnostics and therapeutics for diseases of the skeleton and connective tissues.

The American Council On Education ("ACE"), founded in 1918, is the nation's coordinating higher education association. ACE is dedicated to the belief that equal education opportunity and a strong higher education system are essential cornerstones of a democratic society. ACE's 1,800 members include accredited, degree-granting colleges and universities from all sectors of higher education and other education and education-related organizations. ACE is a forum for the discussion of major issues related to higher education and its potential to contribute to the quality of American life. The American Counsel on Education represents regularly before the United States Supreme Court, other federal courts, Congress, and federal agencies.

The National Association Of State Universities And Land-Grant Colleges was founded in 1887 and is the nation's oldest higher education institution, including public universities, land-grant institutions, and many of the nation's public university systems. As of October 2000, Association membership included 212 institutions, including 75 land-grant universities (of which 17 historically were designated as black public institutions under Second Morrill Act of 1890) and 28 public higher education systems. Tribal colleges became land-grant institutions in 1994 and 30 are represented by the Association through the membership of the American Indian Higher Education Consortium.

The Association of American Universities was founded in 1990 by a group of 14 universities offering the Ph.D. degree. Today, the Association has 61 American universities as members, approximately half of which are public institutions

and half are private. The Association assists members in developing national policy positions on issues that relate to academic research and graduate and processional education. In matters of national science and research policy, the Association is actively involved with a broad cross-section of organizations, including the National Academies of Science and Engineering and the Institute of Medicine.

Research Corporation Technologies is an independent technology management company that provides commercialization services to academia and industry and has been pivotal in the success of many important pharmaceuticals, diagnostics, biotechnology products, new materials and processes.